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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,708	12/22/2000	Miguel A. Saldana	LAM2P222A	4546

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EXAMINER

NGUYEN, GEORGE BINH MINH

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 06/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/748,708

Applicant(s)

SALDANA ET AL.

Examiner

George Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 11-14 is/are rejected.
- 7) ☒ Claim(s) 8-10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1 and 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Receipt is acknowledged of the IDS filed on Paper No. 5 which has been considered and placed of record in the file.

This application has been filed with formal drawings which are not approved by the draftsman as indicated in the attached PTO-948.

Claims 1-14 are presented for examination.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-5 and 12-14 are rejected under 35 U.S.C. 102(a) as being anticipated by Hayashi et al.'392.

With reference to Figs. 4-5A-C, col. 6, line 19 to col. 8, line 8, Hayashi implicitly discloses the claimed invention including: a) first processor programmed to provide pressure data representing the pressure to be applied to the contact area during a polishing step (col. 7, lines 49-59); and b) a second processor programmed to process data representing relative movement between the wafer and the pad in overlapped contacting positions for providing area data representing a value of the contact area between the wafer and the pad in overlapped positions (col. 6, line 59 to col. 7, line 47). Please note that the apparatus of Fig. 4 performs all the functions and steps set forth claims 2-5 and 12-14. Please note that the claims are directed to an apparatus which

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must be distinguished from the prior art in term of structure rather than functions.

Hence, the functional limitations which are narrative in form have not been given patentable weight, a functional recitation must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al.'392 in view of Sandhu et al.'129.

Hayashi has been discussed above, but does not disclose a feedback circuit for providing output signals representing increments of the relative movement.

With reference to fig. 1, col. 6, line 54 to col. 7, line 30, Sandhu discloses a polish control system which adjusts in situ the platen velocity and/or the individual localized pressures applied to the wafer to change the polishing rates of the individual regions of the semiconductor wafer. The two-way arrows shown in fig. 4 represents feedback circuit (col. 7, lines 25-30) to provide in-situ adjustments of operational parameters such as platen speed, slurry composition/flow rate, and polishing pressures to achieve desired polishing uniformity and rates.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the polishing apparatus of Hayashi with a

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feedback circuit as taught by Sandhu to provide in-situ adjustments of operational parameters such as platen speed, slurry composition/flow rate, and polishing pressures to achieve desired polishing uniformity and rates.

Allowable Subject Matter

5. Claims 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: the specific limitations of claim 8 or claim 9, or claim 10 in the combination as claimed are not anticipated nor made obvious by the prior art of record.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Watanabe et al.'368, Inaba et al.'636, Gitis et al.'953, Matsuo et al.'588, Honda'895, Miyazaki et al.'112, Konishi et al.'369, Nyui et al.'187 all disclose polishing apparatus with wafer facing upward..

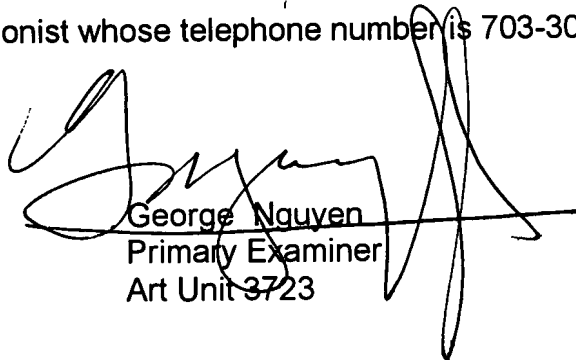
Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Nguyen whose telephone number is 703-308-0163. The examiner can normally be reached on Monday-Friday/630AM-300PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 703-308-2687. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3579 for regular communications and 703-305-3579 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1078.

George Nguyen
Primary Examiner



George Nguyen
Primary Examiner
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GN
June 17, 2002